Investing to House the Workforce:

An Analysis of the Inadequacies in America's Workforce Housing Supply and How Investors Can Contribute to the Solution

Robert V. Fitzpatrick

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Abstract

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The United States has a dramatic disparity between the supply and demand for affordable housing. Specifically, there is not enough housing for middle-income workers, such as fire fighters, teachers, and police officers. Among other things, the shortage is causing local economies to be weakened and people to live less happy lives.

The United States is also home to a thriving commercial real estate industry worth trillions of dollars. Investors in this industry have access to seemingly infinite capital to utilize in investments across a variety of property types. It would seem logical for these investors to also invest in the workforce housing industry; however, real estate investors are not doing so. The goal of this thesis is to understand why they are not solving the housing problem and, in doing so, recommend a way for investors to achieve attractive returns while investing in workforce housing.

The findings of this report suggest that workforce housing does not attract investors on a macro scale due to inferior investment returns that are caused, in part, by local government regulations and a lack of subsidies. Investors will not meaningfully contribute to solving the need for workforce housing until investments become more profitable on a national scale. Thus, this thesis recommends a nationwide federal program similar to programs for low-income housing that is dedicated to workforce housing. Until such a program is created, this thesis recommends that investors only enter into a specific group of major US cities where workforce housing investments are feasible; furthermore, this thesis has compiled a list of the best markets for an investor to enter. Through an analysis of demographic statistics and real estate trends in major cities across America, this thesis recommends a list of 22 cities that investors should invest in if they are interested in workforce housing.

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I would like to thank the many people that have made my experience at the University of Texas so meaningful. To my family, thank you for supporting me over the last four year and encouraging me to pursue my passions. To my thesis advisors, thank you for your insights and recommendations. Your help over the past two semesters has been paramount to the completion of my thesis. To my professors, thank you for always creating an engaging environment for me to learn and grow in over the past four years. Lastly, to my friends and classmates, thank you for your constant support and motivation.

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A Note on the Covid-19 Crisis

At the time of this thesis' release, the US economy has been upended due to the outbreak of Covid-19. The majority of the research and writing of this thesis were performed before the outbreak and were conducted without such a world-changing event in mind. Thus, the analysis and suggestions of this thesis should be considered in the frame of the US economy before Covid-19. The long-term effects of Covid-19 on the US economy are currently unknown, but the findings of this thesis should prevail in the long term.

Introduction

The commercial real estate industry is one of the largest industries in the world with assets across a diverse set of property types, including apartments, offices, and hotels. Investors in the industry are constantly analyzing real estate markets worldwide to find inefficiencies in supply and demand that could lead to potential opportunities. When a disparity in supply and demand is significant enough, real estate investors will develop more supply to capitalize on unmet demand. Without unforeseen circumstances, such as sudden economic downturns, real estate markets generally operate efficiently so that drastic unmet demand only lasts for a short period of time. By operating in one of the preeminent industries in the world, successful real estate investors have access to seemingly infinite capital to fund their investments. Thus, it appears that investors have both the incentive and the necessary capital to address any unmet demand opportunity they identify. Even so, there seems to be one property type in particular that is neglected by real estate investors: workforce housing. Across America, there is a shortage of workforce housing to meet the demand of the nation's most critical service providers, yet real estate investors are not solving the disparity. It is unclear why investors, with access to capital and knowledge of unmet demand, would not invest in workforce housing. Thus, it appears that there are numerous underlying factors that are preventing investors from addressing the need for housing.

In addition, governments at all levels are not doing enough either. The lack of workforce housing hurts the infrastructure, economies, environments, and happiness levels across America. Thus, it would seem logical that local and federal governments would prevent the problem from occurring. The reason for the lack of housing could be that real estate regulations are either inhibiting more workforce housing supply from being developed or not incentivizing investors enough to overcome the financial hurdles that they face. Also, it could be that government efforts, while well-directed, are simply understaffed and underfunded for the size of the problem

This thesis analyzes the need for more workforce housing and seeks to find solutions to address that need. In doing so, this thesis will assess the current disparity in supply and demand as well as the negative consequences that come with that disparity. Also, this thesis will examine the commercial real estate industry and how it operates in the hopes of identifying the primary factors preventing investors from solving the nation's need. Government regulations, spending, and housing programs have a central role in the workforce housing sector, so this thesis strives to assess that role and its effects on the problem. Through these endeavors, this thesis will, ultimately, present a solution for investors to make attractive returns in the workforce housing sector.

Part 1: Brief Background of Workforce Housing and Establishment of Problem

What is Workforce Housing?

The term *workforce housing* can mean a variety of things. In general, workforce housing is a term for housing that does not qualify for federal government subsidies but is still less expensive than the market rents for an area.[1] For the purposes of this paper, housing will need to meet the following four criteria to be deemed workforce housing.

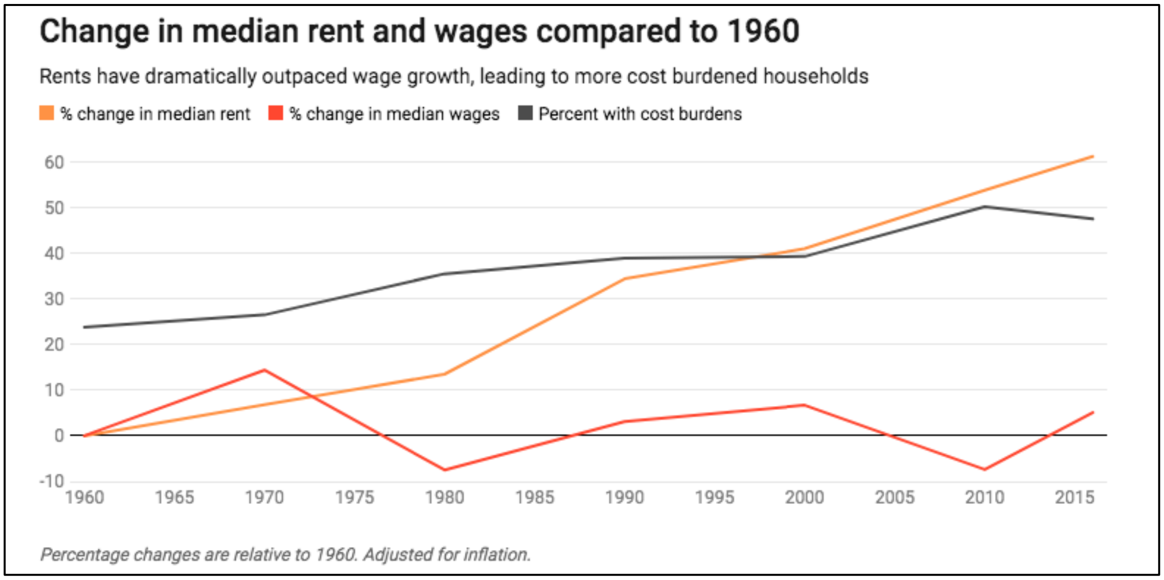
1. Affordability- The housing must be affordable to households with earnings between 60 and 120 percent of the area median income (AMI) for the Metropolitan Statistical Area (MSA) in which it is located.[2] The middle-income residents of workforce housing projects making incomes within this AMI threshold are typically vital service providers such as firefighters, police officers, teachers, and nurses.[3]
2. Proximity- Housing must also be in close proximity to centers of employment. While there could be reasonably priced housing in the exurbs of a city, this housing does not adequately solve the disparity in supply and demand. In fact, for reasons that this paper will address, housing in exurbs actually worsens the problem.
3. Location- The housing cannot be in low-income neighborhoods. Affordable housing options in dangerous neighborhoods with inferior schools do not meet the criteria for workforce housing.
4. Rental- The housing must be multi-family rental properties instead of single-family homes. This paper focuses on the link between workforce housing and commercial real estate investors, so the focus is on income producing multi-family properties instead of single-family homes.

[1] Haughey, R. M. (2007). *Developing housing for the workforce: a toolkit*.
[2] Ibid.
[3] Rowan, S. (2007). Homing in on Profits. Workforce Housing Projects, 41(4), 122–122.

Workforce housing should not be confused with low-income housing. Low-income housing is for the demographic that falls below the 60 percent AMI for an MSA. Further, low-income housing is partially subject to comprehensive federal subsidies through programs such as Section 8 and Low-Income Housing Tax Credits. Workforce housing has fewer to none of the subsidies that low-income housing projects receive. Workforce housing projects can be and sometimes are built without any additional government interactions in addition to the normal permitting processes of a real estate development. Low-income projects, on the other hand, are subject to the requirements of federal government funding programs and therefore require close work with various government agencies. Workforce housing developments can exist without the need for subsidies, and the subsidies of a workforce housing development are structured differently than those used for low-income housing.

Current State

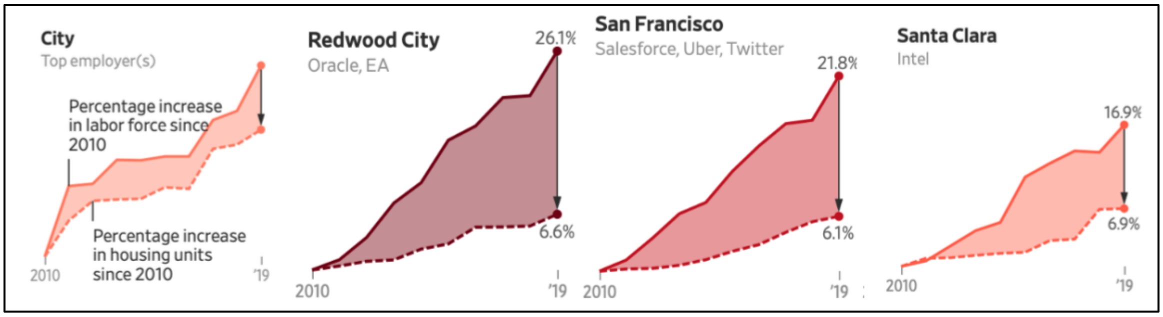
There is simply not enough housing for middle-class workers in America today. In some of American's most economically successful cities, typical residents of workforce housing, such as teachers and firefighters, are frequently being priced out of the cities where they work. It is not financially viable for middle-income households in these fast-growing cities to pay rent to live close to where they work, and middle-income households are even worse off when trying to purchase a home. According to a survey by the Wall Street Journal, nearly two-thirds of renters cannot afford to buy a home.[6] Furthermore, home prices are outpacing wages in 80% of US markets.[7] The rapid growth of housing prices is not occurring solely in the homebuying market. Changes in median rental rates have been rising faster than wages over the past few decades, as shown in the graph below.[8]



Average housing prices are outpacing wage growth adjusted for inflation, making housing unaffordable for the middle class. An increase in overall wage growth is not necessarily the answer. In fact, when wage growth is reserved for a small group of a population, the problem of housing affordability can actually be worsened. A prime example can be seen in cities with a heavy concentration of tech jobs. Jobs in the technology sector bring an increase in housing needs coupled with higher spending

6 More Renters Give Up on Buying a Home—WSJ. (2018, April 3).
7 Home prices are rising faster than wages in 80% of U.S. markets. (2019, January 10).
8 Joint Center for Housing Studies of Harvard University. (2016). *The State of the Nation's Housing*

power. The effect of technology jobs on the need for housing can best be seen in California, as shown in the graphs below.[9]

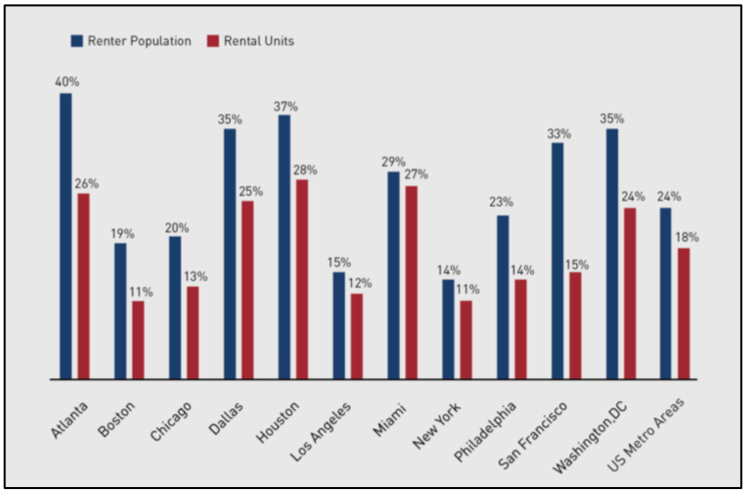


As a result, housing prices typically go up in these cities and middle-income workers can no longer afford housing. The middle class has decreased over the last few decades, and between 2000 and 2014, the middle class decreased in 203 out of 229 US metro areas.[10] In addition, the smallest middle-class populations are in the leading tech cities such as San Francisco and New York. The workforce housing currently available is often outdated and inferior. Also, many projects that used to be considered workforce housing have undergone renovations and rent bumps that have priced them out of the reach of the middle class. Partly due to this pricing out of renters, 125,000 affordable rental units are lost every year in the United States.[11]

If current workforce housing trends continue, the disparity between supply and demand is only going to worsen. Current projections estimate an expected demand of 4.5 million new apartments in America by 2030.[12] Further, renter population is growing more rapidly than rental housing units. From 2006 to 2014,

[9] *Google Wants to Pour Money Into San Jose. The City Has a Few Demands. - WSJ*.
[10] Florida, R. (2017). The Unaffordable Urban Paradise. MIT Technology Review, 120(4), 88–91.
[11] ULI Special Report: A Call for a New National Housing Policy. (2016, April 22).
[12] Jacobius, A. (2017). Workforce housing catches eye of managers, investors.

renter population growth outpaced rental unit growth in the US's 11 largest MSAs, as shown in the graph below.[13]



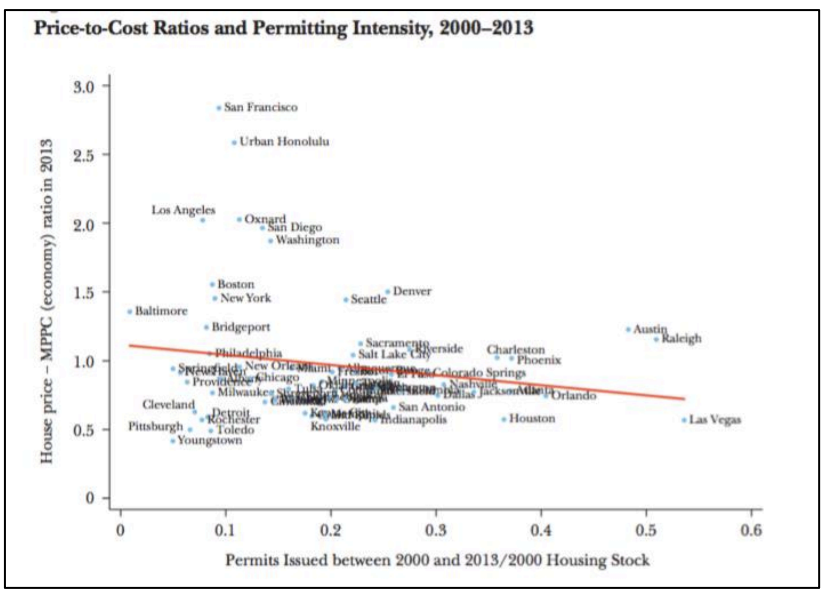
There is a legitimate housing crisis in America, and if nothing is changed, then America's middle-class workforce will continue to be hurt by the inadequate housing supply.

The different levels of the government have complicated roles in the workforce housing problem. Some local governments do incentivize workforce housing development, and the paper will discuss many of these programs later on. However, local and federal government disproportionately focus on home ownership affordability over rental affordability. Homeownership subsidies comprise the foundation of the nation's housing market, yet many people do not realize it. J. Ron Terwilliger, the chairman of the ULI Terwilliger Center for Housing, says that three-fourths of the $200 billion in federal government spending on

13 Gould, I. and Karfunkel, B. (2016). Renting in America's Largest Metropolitan Areas

housing goes towards homeowners instead of renters, even though renters make half as much as homeowners.[14] The federal government's efforts to provide tax benefits through mortgage borrowing and to protect Fannie Mae and Freddie Mac in the event of collapse affect the way every American purchases a home. There is no comparable federal government effort in size and scope within rental housing.

Local governments also worsen the problem by limiting new developments and contributing to rent increases. There is a general trend in cities across America where the housing costs decrease as the number of government-issued permits increase. This trend is shown in the graph below.[15] In the graph, the minimum profitable production cost (MPPC) of a unit of housing is shown to decrease in American cities as the ratio of issued permits between 2000 and 2013 relative to the housing stock from 2000 increases.



14 ULI Special Report
15 Glaeser, E. L., & Gyourko, J. (2002). *The Impact of Zoning on Housing Affordability*

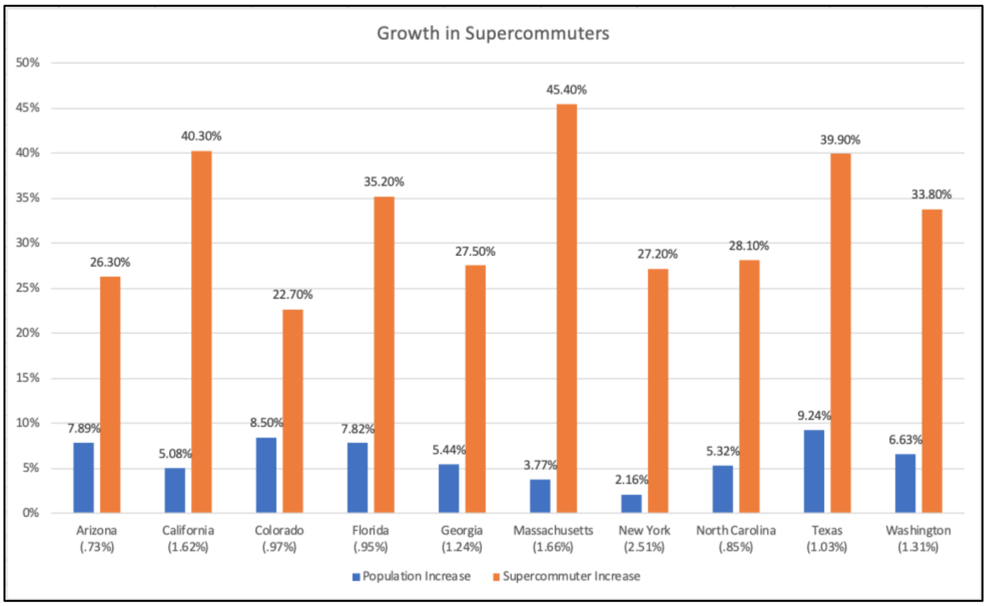
In short, it seems that permitting has a direct effect on the price of housing. This thesis will examine this relationship in depth later on, but it is important to understand that all levels of government can have legitimate impacts on improving and worsening the affordability of housing in America.

The Negative Effects of the Current Disparity

The negative effects caused by the lack of workforce housing are substantial As a result of increased housing prices, workers are moving to the suburbs and exurbs far away from their jobs. There are additional transportation cost burdens for renters by moving further away from their jobs. Fuel, more tolls, and increased wear and tear on cars become major costs for households. An increase in fuel prices alone can wipe out many of the cost benefits of living further away from employment. The increase in urban sprawl caused by workforce housing shortages has tremendous impacts on the environment as well. Agricultural lands, vegetation, and trees are being destroyed to create highways to new exurban housing. The destruction of these lands is negatively affecting storm water runoff, causing degradation in water quality.[17] In addition, workers commuting long distances to work are releasing harmful car emissions, furthering the degradation of the surrounding environment. Further, there is an increase in traffic due to more people commuting to work. The same distance is taking drivers longer to travel each year due to this increase in traffic. These long commute times make workers frustrated, less motivated, and late to work. One study out of the College of the West of England found that people perceive an additional 20 minutes of commute time to be as

[17] Haughey. *Developing housing*.

worse as a 19% pay cut.[19] The negative effects of long commute times on happiness levels are particularly concerning given the recent growth in people that commute over 90 minutes to work. This group of people is also known as "supercommuters," and they have been rapidly increasing across the US. The graph below exhibits the rapid growth of supercommuters across US states from 2010 to 2015 compared to the states' population growth. The number in parenthesis represents the population of "supercommuters" out of the entire state's population.[20]



There are a number of other studies that also show an increase in "psychosomatic disorders" in people that commute long distances to work. Symptoms of these disorders include headaches, fatigue, and high blood pressure.[21]

There are also substantial impacts on companies in cities without enough workforce housing. Companies are having a more difficult time attracting superior

[19] Loudenback, T. (2017, October 23). *Study: Adding 20 Minutes to Your Commute Makes You as Miserable as Getting a 19 Percent Pay Cut*.
[20] Sisson, P. (2017, June 20). *How America's ever-longer commute reflects its affordable housing crisis.*
[21] Data sourced from the Census Bureau and *How America's ever-longer commute reflects its affordable housing crisis.*

talent because of insufficient housing. In a survey of over 300 corporations, 55 percent of companies with more than 100 employees recognize a deficiency in the affordable housing supply in their area. In addition, two-thirds of these companies feel that the insufficient housing supply is negatively affecting their ability to retain employees; furthermore, half of the companies feel that painfully long commutes are resulting in turnover.[23] When companies struggle to attract talent, they must offer higher salaries to attract employees. The total costs of the company end up increasing as a result, and employers are less inclined to be in a city with high costs of doing business.

> Hsieh and Moretti (2017) have estimated that real GDP could be nearly 9 percent higher if there were plentiful new construction in just the three high productivity markets of New York, San Francisco, and San Jose, so that people could move to equalize wages. [24]

New construction, specifically in affordable housing, has the potential to bring an increase in jobs and consumer spending to local economies. Cities that are not developing additional workforce housing are missing out on the potential to stimulate investment and spending in their economies.

[23] Wardrip, K., Williams, L., & Hague, S. (n.d.). *The Role of Affordable Housing in Creating Jobs and Stimulating Local Economic Development*: 22.
[24] Glaeser. Economic Implications

> Over two years (2006-08), an investment of $260.1 million in affordable housing leveraged roughly $470 million in additional public and private funds and resulted in nearly $1.4 billion in direct, indirect, and induced economic activity. This level of activity generated roughly $62.5 million in state and local tax revenue.[25]

The development of workforce housing provides new jobs for construction workers, new customers for restaurants and retail stores, and a lasting impact on economies. According to the National Association of Home Builders, a 100-unit market-rate multifamily property creates 80 jobs directly and indirectly by new construction, 42 jobs supported by spending, and 32 jobs by new apartment residents.[26] With so many negative consequences to a lack of workforce housing, the question then arises: why is there not more workforce housing in America?

Part 2: Institutional Investments in Workforce Housing

Overview of Real Estate Investments

Workforce housing is a specific investment opportunity in a larger industry known as commercial real estate (CRE). CRE is a very popular investment around the world, totaling $1.7 trillion dollars in trading volume in 2019.[27] In the US alone, the value of CRE is $4 trillion dollars.[28] The capital available for CRE transactions is abundant and it come from a diverse group of investors. The largest investors in the

[25] Wardrip, *Affordable Housing in Creating Jobs*
[26] Ibid.
[27] RCA
[28] Linneman, P., & Kirsch, B. (2018). *Real Estate Finance and Investments: Risks and Opportunities*

space include private equity funds, sovereign wealth funds, pension funds, and REITs.[29] Investments in the CRE industry can take many forms. Some of the most popular modes of investing include buying and selling existing properties, developing new properties, and providing financing to the previous two options. In addition to selecting from these modes of investing, investors choose from an array of property types, which include office, industrial, retail, hotel, and apartment buildings. Each property type has a different profile of risks and rewards, but the general considerations of any CRE investment are as follows.

Risks[30]

1. Operating Expenses - Every CRE property requires capital to continue its daily operations. These expenses include insurance, utilities, and taxes. As operating expenses increase, investors can be left with diminishing profits.
2. Vacancy - Buildings need to be full of rent paying tenants for investors to make steady streams of cash. Apartment buildings need tenants leasing their units, hotels need guests, and offices need companies renting space.
3. Leasing - Different property types have different lease structures. Apartments typically have year-long leases while offices tend to have 5+ year leases. The length of the lease and the costs to replace an expired lease are important considerations.
4. Liquidity - Investors must consider the ease with which they can sell their real estate properties. Varying market conditions can affect an investor's

[29] DeLisle, J. R. (2016). Ahead of the Curve: A Potential Inflection. *Appraisal Journal*, *84*(2), 101–119.
[30] Linneman, P., & Kirsch, B. (2018). *Real Estate Finance and Investments: Risks and Opportunities*

ability to liquidate their assets.

Opportunities[31]

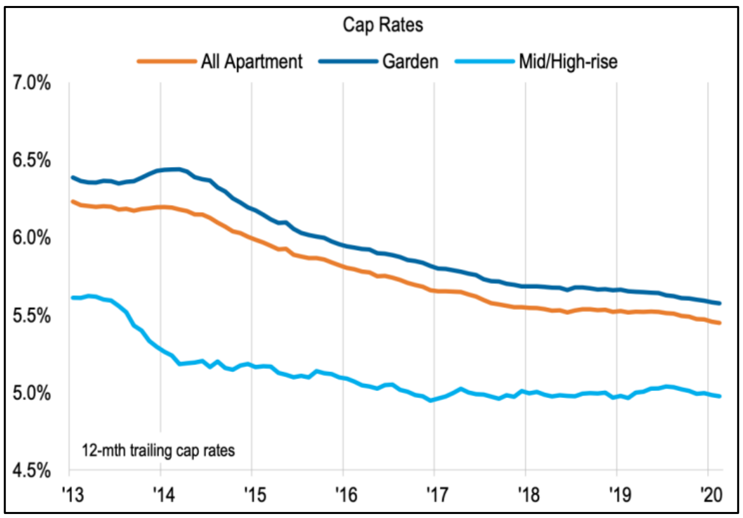
1. Operating Expenses - While expenses can be a risk, they can also be a source of profit. Decreasing operating expenses can improve the profitability of a project.
2. Terminal Value - This refers to the price of the property at sale. Investors can make a majority of profits from a real estate transaction from a high terminal value.
3. Rental Growth - Over time, depending on submarket economic fundamentals, building owners may be able to increase the rents assigned to tenants. Strategically increasing the rent of a building can have major implications for the profits of a CRE investment.

Each property type has nuances to their specific risks and opportunities that give them varying degrees of risk. Transaction volumes of real estate in the US as of February 2020 are modeled in the chart below.[32]

	Past 12 Mths	
	Vol ($b)	YOY
Office	143.1	7%
Retail	63.5	-27%
Industrial	127.3	33%
Hotel	35.6	-18%
Apartment	182.5	3%
Snr Hsg & Care	18.1	18%
Total	591.0	3%

[31] Ibid.
[32] Data sourced from Real Estate Capital Analytics

Investors are spending billions of dollars across a range of risk profiles, so it seems like there is plenty of capital available to be spent in the workforce housing sector. Further, workforce housing falls under the property class of apartments, which is one of the most popular CRE investment categories currently. With $182.5 billion dollars in transactions, apartments have had the highest volume of trading activity in the past twelve months. In addition, the cap rates of apartments have been steadily compressing since 2013.[33]



Cap rates are a valuation metric for real estate and the general rule is a lower cap rate means a more expensive price for a given property. Thus, apartment buildings have been appreciating in value over the past seven years.

Considering the amount of capital, diversity of investors, and variety of risk profiles in the CRE industry, it would seem logical that the workforce housing sector would not be any different. While there are some investors in the workforce housing space, the unfortunate reality, however, is that the majority of investors are

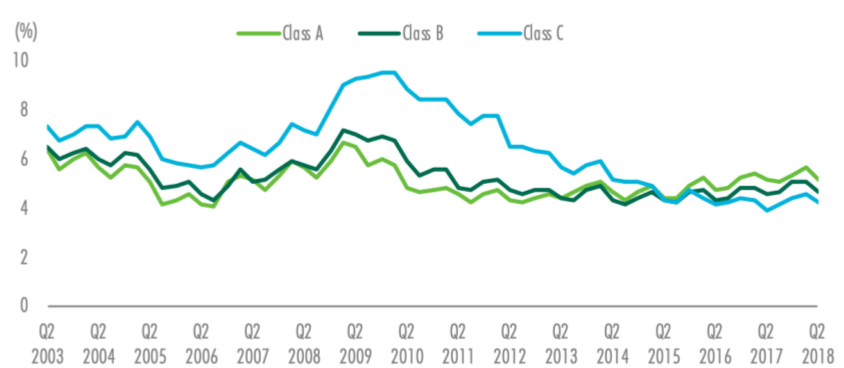
33 Ibid.

unwilling to invest in the sector.

Investment Overview in Workforce Housing

The risks and opportunities of market-rate apartments and workforce housing are quite similar, but they differ during an economic downturn. Many investors believe that workforce housing is resistant to negative changes in the economy and, as a result, is a safe investment. For example, the CEO of Sabal Capital, a California-based real estate and finance company, says that "work force housing multifamily [is] more recession averse than multifamily in general." The idea is that renters will be less willing to pay for premium rents during a recession, so there will be an increase in demand for affordable units such as workforce housing. Further, there will be a rise in the number of renters as more people will opt for renting over single family ownership. Data from the economic downturn of 2008, however, suggests otherwise.

Figure 6: Historical Multifamily Vacancy by Class

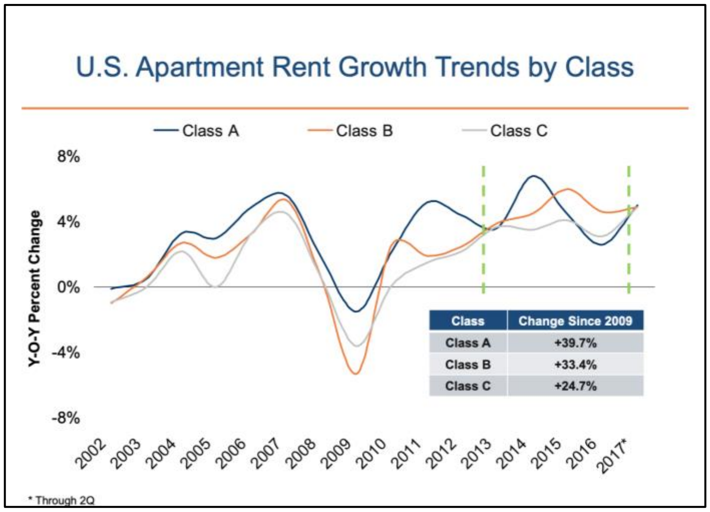


The graph above shows the vacancy rates of class A, B, and C apartments from 2003 to 2018.[34] Class A apartments are relatively new and charge higher rents while B and C apartments are generally older and charge moderate to low rents. Thus, workforce housing usually falls into the class B and C classifications. During the great recession, class C apartments rose to above 9% vacancy and class B increased to over 7%, while class A only reached 6.8%. Also, the vacancy of class B and C apartments have been consistently higher than class A until 2013. It appears that workforce housing units underperformed during the last recession. When asked if he agrees with the notion that workforce housing is recession resistant, the CEO of Greystar, Bob Faith, had this to say:

> Yeah, I disagree with it. Under a recessionary environment, guess what happens? Your luxury stuff fills up. You lower the rents, you fill them up and what happens is everybody upgrades, so your nicer product always wins. You just may have to lower the price.[35]

During a recession, apartments across the board will lower their rents to maintain demand, as Mr. Faith alluded to. The graph below demonstrates this trend during the last recession.[36] The graph shows the year over year percent change in rents across class A, B, and C apartments.

[34] *The Case for Workforce Housing*. (n.d.). CBRE.
[35] Faith, B. (2020, April 14). Personal interview.
[36] Marcus & Millichap Research Services, MPF Research



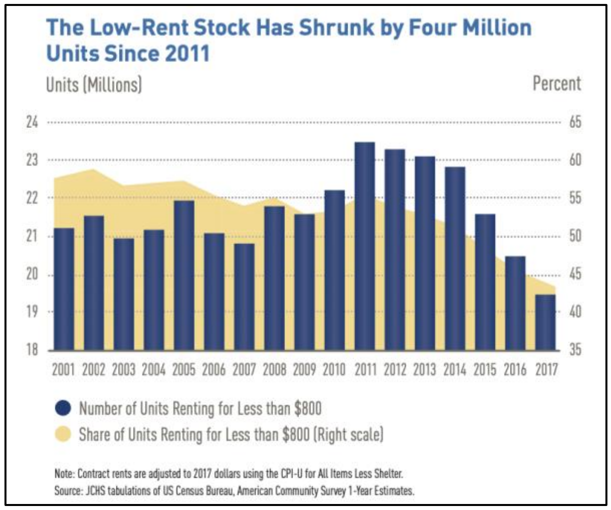
Class B and C apartments had to decrease their rents more than class A apartments over the last downturn, suggesting that the already low rents of workforce housing apartments had to decrease even more to maintain adequate demand during the recession. Contrary to the opinion of many real estate investors, the data on vacancy rates and rent growth suggest that workforce housing actually does not perform better during economic downturns.

As Mr. Faith said, people will actually opt for a luxury product during a recession since its available at an attractive price. Another explanation to the underperformance of workforce housing during the last recession is the decrease in household formations. During recessions, people are less willing to move out of their childhood homes, and existing renters and families will look to move in with relatives or to add roommates. Also, immigration slows in a recessionary economy as there are fewer available jobs. Subsequently, the household formation decreased from 1.34 million in 2007 to 286,000 in 2010.[37]

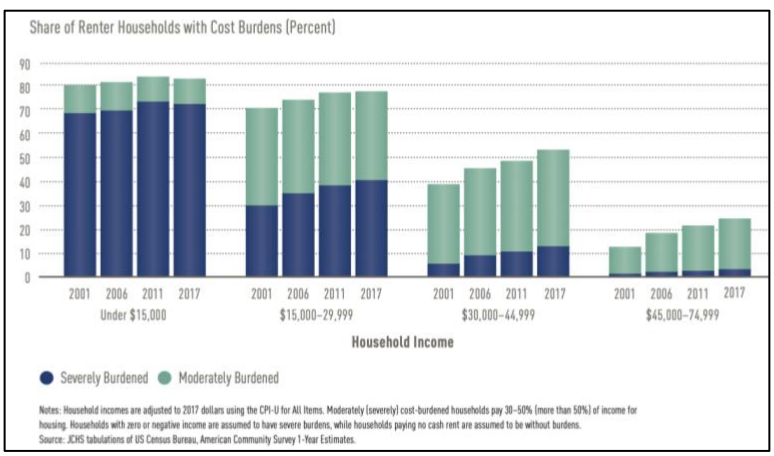
The data from the last recession suggests that workforce housing is not "recession resistant" as many people claim, but there is data that suggests that workforce housing is better positioned today for an economic downturn than it was leading up to 2008. Over the past few years, the supply of workforce housing has continued to diminish while the demand for it has increased. Further, there are population metrics that suggest there will be an increase in household formations in the coming years. Subsequently, workforce housing may outperform the rest of the multifamily sector during the next recession.

After the recession in 2008, the share of renter households has steadily increased in America, peaking at just under 37% in 2016. Comparatively, the share of renter households was around 32% in 2007. Coinciding with this increase in renters, the occupancy rates of class B and C apartments surpassed class A apartments in 2013 and 2015 respectively. In addition to this increase in demand for rental properties, there has been a decline in affordable units available. The graph below shows the stock of low rent units in America from 2001 to 2017.[38]

[37] *The Case for Workforce Housing*. (n.d.). CBRE.
[38] *Joint Center Sees Multiple Problems Emerging from Construction Shortfall*.



Low-rent apartments made up almost 55% of rental units in 2007, but that number has decreased to below 45% in 2017. This drop in low-rent units is similar to the drop in units affordable to median-income renters. Since 2008, the share of new apartments priced for median-income renters has declined to less than 3% annually.[39] Consequently, the share of renter households with cost burdens has increased across most income groups, as shown in the graph below.[40]



All of these metrics suggest that there is greater demand and less supply for workforce housing as of the beginning of 2020 than before the last recession. Thus,

39 The State of the Nation's Housing 2019 | Joint Center for Housing Studies, Harvard
40 Ibid.

it seems that the workforce housing sector is better positioned for an economic downturn.

Additionally, an increase in the population of people between 25-34 years old could mitigate the concern for a potential decrease in household formations during a recession. According to data from the Census Bureau, this age group makes up the largest population in the US as of 2017. Further, the population of this age group is around 6 million people higher than it was in 2007. Thus, there are more people in the US at the average age of household formation, so while there may be a similar percent decline of household formations in the next recession as the last one, there would likely be a greater number of household formations in aggregate.

Currently, the outbreak of Covid-19 has slowed economic activity in the US as people are forced to shelter in place. It is unclear exactly how the economy of the US will be impacted in the months and years to come due to Covid-19. The economic rebound could be quick, but there is also a possibility of a recession similar to 2008. If the latter scenario comes to fruition, it seems that workforce housing will be better positioned than it was in 2008. Due to low the vacancy rates and declining supply of workforce housing and improved demographic metrics, workforce housing will likely perform similarly if not better than class A multifamily.

Workforce housing is also attractive to investors for its potential benefit to society. Canyon Capital Realty Advisors is an investment management firm based in California that has been making consistent returns of 15 to 20 percent in the workforce housing sector.[42] According to the founder, new developments are going to sell easily. Also, an investment in this sector can enable investors to make an impact in communities across America. Canyon's first workforce housing fund generated 9,500 construction jobs and 4,000 lasting jobs.[43] Humanitarian benefits of workforce housing, like adding housing and jobs to a community, can lead to increased financial returns. Workforce housing developments can provide companies with publicity and enhancements to their reputations. New workforce housing developments are often publicized in the local media, so investment companies receive positive press coverage. Having a good standing in a community is important for a real estate company because community outrage and protests are often the cause of real estate projects failing to win approval from local governments.

The positive reputation benefits can also help investors attract new sources of capital. Pension funds are a significant source of capital in the CRE industry, and some of the largest funds are those of teachers and firefighters. For example, the California State Teachers' Retirement System consists of $213.7 billion in assets and is the eleventh largest pension fund in the world.[44] When these pension funds come across workforce housing investors they will be increasingly motivated to contribute capital. For example, the aforementioned California State pension fund

42 Rowan, S. (2007). Homing in on Profits. Workforce Housing Projects, 41(4), 122–122.
43 Ibid.
44 *Top 20 pension funds' AUM declines for first time in seven years*. (n.d.). Willis Towers Watson.

committed $200 million to an investment group focused on workforce housing.[45] Also, a large Canadian pension fund approached Greystar, the largest apartment company in the world, and said that it would accept a lower investment return if Greystar would invest in affordable housing.[46] It seems that there is a strong desire from capital sources to enter the affordable housing market.

Potential Shortcomings in Workforce Housing Investments

Due to the sustained need for more workforce housing in the market, it seems that there is a reason that investors are hesitant to enter this space. There are a number of possible causes that could explain the lack of investors in the workforce housing sector, so it is important to analyze the merits of each plausible scenario.

No Access to Capital

One potential explanation for the lack of workforce housing is that investors do not have enough capital to enter the space. By just looking at the transaction volume in CRE alone one could realize there is plenty of capital to go around. When asked about the issue of accessibility to capital, Bob Faith, responded that he "doesn't think there'd be any problem at all finding the capital" for a workforce housing investment if it offered good returns.[48] Globally, people are looking for a wide array of investment opportunities, ranging from extremely reliable, such as government bonds, to relatively risky, like technology start-ups. As a potentially

[45] Jacobius, A. (2017). Workforce housing catches eye of managers, investors. Pensions & Investments, 45(20), 0005–0005.
[46] Faith, B. (2020, April 14). Personal interview.
[48] Faith, B. (2020, April 14). Personal interview.

recession resistant, tangible asset, workforce housing seems to be an opportunity that investors could raise capital for. As a result, it seems that investors are choosing not to do so. The reason being, possibly, that workforce housing projects provide inferior returns compared to other comparable CRE opportunities.

Inferior Returns

The potential for workforce housing to outperform in the next recession can only help the sector so much. If workforce housing projects make dramatically lower returns than comparable Class A apartments, then investors are going to choose to invest in Class A apartments every time. Workforce housing could be experiencing these dramatically lower returns for a number of reasons, such as below-market rents, high development costs, low terminal values, and low liquidity.

All else being equal, workforce housing buildings will have lower rents than typical Class A apartment buildings. Thus, the cash flows of a workforce housing buildings are smaller. A workforce housing building would have to have considerably more units to bring in the same cash flow as a Class A building; however, constructing buildings with more units is not an adequate solution. Due to the cost structure of developing apartments, increasing the number of units in a building can actually hurt the profitability of workforce housing projects. There are too many additional costs involved that outweigh the incremental benefit of more tenants. Not surprisingly, most of the affordable housing projects in the US are 100 to 200 units in size.[49]

The costs of developing a workforce housing project are considerable, especially since workforce housing buildings bring in lower cash flows. Thus, it is harder to offset the cost burdens of development. Across the board, development costs of new multi-family projects have been increasing as of February 2020. Due to immigration policies that have become more restrictive, there are fewer immigrant workers available for hire in the construction industry than was true 20 years ago, which is driving up the costs of labor.[50] Further, building materials, such as steel and aluminum, have increased in price much faster than inflation, resulting in the cost of materials increasing 10% year over year in 2018.[51] As of 2018, the combination of higher labor and material costs have caused total construction costs to increase 23.6% since 2004.[52] Additionally, it is hard for developers to make the decision to build workforce housing over a luxury product because 90% of the costs are the same. According to Bob Faith, a workforce housing apartment and its luxury counterpart both have the "same foundation, same structural elements, same plumbing."[53] The additional 10% of costs can go to nicer finishes and better common areas, but the majority of construction costs are identical. Also, the rents of the luxury product exceed the rents of workforce housing by considerably more

[49] Borl, K. M., March 03, |, & PM, 2020 at 02:00. (n.d.). *Why Institutional Investors Haven't Made a Big Splash in Affordable Housing*. GlobeSt.
[50] Bernstein, J., Parrott. The conundrum affordable housing poses for the nation. Washington Post.
[51] Borl, K. M., June 14, 2019 (n.d.). Construction Costs Increased More Than 5% in 2018. GlobeSt.
[52] Ibid.
[53] Faith, B. (2020, April 14). Personal interview.

than the difference in development costs, so it is an easy decision for investors to neglect workforce housing.

There is also the question of liquidity. No investor would want to put their money into workforce housing if they had no way of getting it out. It is possible that the market for workforce housing buildings is very slow and that very few people are willing to buy the projects. The apartment market is very hot right now, however, and people are buying and selling apartments in large volumes. By the end of 2019, investment sales volume in the multi-family space reached an historic high of $183.5 billion. Since workforce housing falls into the multi-family sector, it appears that workforce housing is not affected by a liquidity problem. In addition, workforce housing projects benefit from the low cap rates of the multi-family sector, so the terminal value of a workforce housing investment does not seem to be of concern.[54]

Any investor, regardless of industry, should not only take into account the potential profits of an investment but also the opportunity cost of all the projects that they are not pursuing. Thus, the profitability of a workforce housing investment should also be compared to the profitability of investing in a Class A building. Due to the difference in asking rents between workforce housing and Class A projects, investors reach the conclusion that workforce housing is the inferior opportunity.

Part 3: Government Policies Regarding Workforce Housing

The different levels of government have direct impacts on America's housing

[54] Hammes, C. (2019, July). Personal interview.

shortage. In many instances, local governments have recognized the need for more workforce housing and, subsequently, have created programs to address that need. Local and federal governments are also partly to blame for there being a housing shortage to begin with, so many of the government programs are in fact efforts to make up for the past.

The Government's Harm on the Workforce Housing Supply

Local governments' extensive regulations can be a hinderance to the production of new workforce housing product. Local government authorities have the ability to block or allow the zoning of workforce housing, so localities without a directive to increase housing may be inhibitive to workforce housing developers. Even though it may seem like all government authorities should have a focus on addressing their housing problem, it is not always the case. In fact, local governments are often motivated to prevent workforce housing developments. The reason behind this seemingly illogical move is not from a lack of incentives. There are indeed incentives for federal and local governments to help their citizens' housing needs, but there are even more incentives for these government agencies to pursue other avenues.

Local governments will often prefer different real estate projects to be developed in the place of workforce housing. Real estate developments, such as office buildings, are more attractive to the local government because they generate higher net property and sales tax revenue than workforce housing developments. Most likely, the workforce housing project would require some type of abatement from the government while a development such as a new office building would need no abatements. Thus, the local government would gain more from the taxes of almost any other development opportunity over workforce housing. Also, with the addition of housing comes additional need for municipal services such as police and fire stations. As a result, local governments are not only losing out on property taxes, but they are also having to spend money to fund the additional infrastructure needs.[55] Further, governments listen to the pushback from its citizens on the topic of workforce housing. People protest workforce housing for a number of reasons, but a major reason is a desire from homeowners to prevent poorer people and large apartments from entering their neighborhoods. There is a stigma around affordable housing and communities will go to extreme lengths to prevent new workforce housing developments from occurring. It is already difficult for all levels of government to justify using tax dollars to support workforce housing. The people within the 60% - 120% AMI generally have access to better quality housing than people that are considered low-income, so there is less focus on workforce housing. Because of this and the protests from communities, local governments are incentivized to limit new workforce housing projects.

Government regulations can also contribute to the high costs of housing in America. In a study by Edward Glaeser and Joseph Gyourko, they found evidence that housing affordability problems in America are caused by strict zoning instead of land and construction costs.

[55] Faith, B. (2020, April 14). Personal interview.

> The bulk of the evidence… suggests that zoning, and other land use controls, are more responsible for high prices where we see them. Measures of zoning strictness are highly correlated with high prices. … it seems to suggest that this form of government regulation is responsible for high housing costs where they exist.[56]

It appears that increased amounts of zoning are responsible for some of the affordability problems in American cities. For example, every regulation in cities in California is connected to a 2.3 percent increase in the cost of rental housing according to a study from John Quigley and Steven Raphael.[57] Additional zoning requirements and bureaucratic measures put into place by local governments are hindering the ability of real estate developers to address the housing needs of major US cities. One study found that rents in high-cost coastal cities would decrease by 9% if those cities implemented similar zoning laws to the rest of the nation.[58] Strict zoning found in almost every market in the US prevents new construction from happening. Consequently, housing prices are increasing dramatically because there is less supply to meet the demand of the market. There may be a compounding effect on workforce housing from strict zoning. The housing that does exist is inherently more expensive in strict zoning markets, and local governments are not motivated to grant zoning relief to workforce housing investors because of external motivations such as community backlash.

[56] Glaeser, E. L., & Gyourko, J. (2002). The Impact of Zoning on Housing Affordability
[57] Quigley, J. M., & Raphael, S. (2005). Regulation and the High Cost of Housing in California.
[58] Zoning, Land-Use Planning, and Housing Affordability. (2017, October 18). Cato Institute.

The Government's Efforts to Help the Workforce Housing Supply

Not all local governments have such a constricting effect on the workforce housing supply. In fact, some cities have clear mandates to promote the growth of workforce housing. Local governments can provide tax abatements, land grants, and attractive financing that can be critical to the success of a project. For example, there are some local governments that are providing density bonus programs where developers can add additional units to a building in return for having income restrictions on those units. Buildings have many fixed costs, so the additional income-restricted units do not add significantly to the development costs of the entire project. Plus, the extra units make a significant impact on the cash flows of the property. As a result, these density bonus programs can enable the development of many projects that otherwise could not have been constructed.[59] It is important to note, however, that the density bonus programs are mitigating the negative effects of increased zoning. Thus, it could be more helpful to make zoning less restrictive to begin with instead of including density bonus programs. The current environment for workforce housing subsidies is very balkanized across local jurisdictions. Unlike the Low-Income Housing Tax Credit program, workforce housing programs are mainly localized. The successful utilization of programs by investors requires the knowledge of potential programs and established relationships with local government officials and corporations to actually enact the subsidizes. In its current structure, local government incentives are hard to understand and lack standardization. Even more so than any other real estate asset, workforce housing

[59] Faith, B. (2020, April 14). Personal interview.

landscapes radically change from city to city. As a result, investors can have trouble scaling their workforce housing strategies across the nation.

Part 4: Strategy for Investors to Overcome Barriers to Entry

As the paper has discussed, there are legitimate reasons for why investors are not entering the workforce housing space and, as a result, there being inadequate housing in the US. There are strategies that investors can follow, however, that improve the prospective returns of a workforce housing investment so much that investors will view workforce housing in line with any other property type within CRE. The strategies available to investors can be divided into two categories: development tools and acquisition tools. As previously discussed, the two biggest contributors to the disparity in supply and demand for workforce housing is the lack of new developments and the obsolescence of existing properties. The strategies address these causes head on.

Development Tools

The development tools investors should utilize to achieve attractive returns in workforce housing center around reducing the costs associated with development. The most obvious development cost to target is the cost of construction. While the cost of building materials and labor have risen, there are ways to diminish the cost of building a new apartment. First, developers can limit their workforce housing developments to be garden style apartments. This style of apartment, compared to podium and high-rise apartments, is cheaper to construct. An average three-story walk-walk up garden apartment will have no elevator, a wood frame, and all surface level parking. The other styles of apartments must spend large amounts on structured parking and on the additional costs associated with building above three stories. Once an apartment reaches four floors, many additional costs must be added in to meet the fire code, such as elevators. Assuming the same number of units and square footage, a garden apartment would require a household income of $43,000 while a high rise would require an income of $86,000 to cover the rent.[60] The style of apartment has a big impact on the costs of construction and the subsequent returns of the investment. In the graph below, the current and historical returns of different multifamily subtypes are shown.[61]

MULTIFAMILY SUBTYPE	CURRENT ONE-YEAR RETURN: TOTAL RETURN (%)	CURRENT ONE-YEAR RETURN: INCOME RETURN (%)	CURRENT ONE-YEAR RETURN: APPRECIATION RETURN (%)	20-YEAR HISTORY: AVERAGE TOTAL RETURN (%)	20-YEAR HISTORY: STANDARD DEVIATION (%)
High-Rise	4.87	3.97	0.88	10.09	10.03
Garden	9.25	5.00	4.10	9.94	7.79
Low-Rise	7.17	4.31	2.78	9.73	8.36
All Types	6.35	4.30	1.98	9.55	8.38

Garden apartments do require more developable land than other apartments. As a result, investors will have more difficulty developing garden apartments in dense MSAs. Even so, it is important to note that investors can minimize the relatively high costs of workforce housing by altering the style of apartment.

Workforce housing developers can also achieve better investment returns through creative land acquisitions. Purchasing the land for an apartment is another significant cost, but it can be diminished in a number of ways. Because of the aligned incentives of investors and all levels of government to create more housing, there

[60] Hill, B. L. (n.d.). The rents needed to justify apartment construction costs.
[61] The Case for Workforce Housing. (n.d.). CBRE.

are some partnerships available with local and federal governments to lower the cost of land. One option is to ask local governments to grant public land to investors for the development of workforce housing. Specific possibilities of public land include surplus school properties and public libraries. For example, The Bookmark Apartments in Portland, Oregon, a 47-unit workforce housing building, was constructed on top of the local library.[62] Also, the Casa del Maestro workforce housing project in Santa Clara, California was constructed on extra land from the local school district.[63] By partnering with local governments, developers can make their workforce housing projects economically feasible.

> Skyrocketing land costs are a large component of development costs and a big part of the affordability problem. Factors that affect land cost and availability include title issues, encumbrances, tax liens, environmental contamination, and the presence of natural resources.[65]

Developers can also seek help from local land bank authorities, which are nonprofit organizations designed to hold land for redevelopment. Land banks have special authority to expediate the process of readying a site for development, such as clearing title encumbrances and cleaning contamination. Further, land banks can forgive delinquent property taxes from foreclosed properties. All of these measures enable developers to acquire inexpensive land. For example, The City of Atlanta Land Bank Authority has supported the construction of over 900 housing units.

62 Haughey. *Developing housing*.
63 Ibid.
65 Ibid.

While it is possible to use land banks to minimize the costs of developing workforce housing, land banks are not designed for this purpose. Land banks are usually used to prevent the degradation of cities instead of helping the affordability of housing in economically strong cities. Thus, it is unlikely that land banks will be available to help investors in the cities that need workforce housing the most.

Another creative way for developers to cut land costs is through brownfield redevelopments. Brownfield is a classification for vacant properties that are contaminated by hazardous chemicals and require extensive efforts to clean up.[66] Subsequently, these properties are unattractive to most investors. Thus, there is a buying opportunity to save money. Brownfield sites are very risky, however, since they require extensive time and money to clean up. Also, there is some liability risk if future residents of the brownfield site are negatively affected by the contaminants. Local governments have programs that help clean brownfield sites and provide protection from liability claims. For example, Pennsylvania's Land Recycling Program offers financial incentives and liability relief to developers that restore brownfield sites.[67] Even with programs like this one, it is important to be cautious when acquiring brownfield sites.

In addition to saving on land costs, workforce housing developers can achieve attractive financing options through certain government programs. Financing programs for workforce housing are scarce compared to the programs offered to low-income housing; however, there are still programs available that

[66] US EPA, O. (2014, January 8). Overview of EPA's Brownfields Program
[67] Haughey. *Developing housing*.

cater to the population making above the 60% AMI threshold. One example is the Housing Trust Fund (HTF). The HTF is a program dedicated to increasing and maintaining affordable housing supply.[68] The HTF focuses primarily on low-income housing, but there are opportunities for workforce housing as well. The HTF can provide predevelopment financing and aid with land acquisition and construction. While funding for the HTF has been increasing, growing from $174 million in 2016 to $267 million in 2018, there is a need for much more funding before the HTF can be an effective tool across the US.[69] Developers can also receive help from local taxation programs. Many local governments offer tax abatements to incentivize new development. For example, the Portland Development Commission offers incentives such as ten-year tax abatements to enable development of workforce housing.[70]

Acquisition Tools

Instead of developing new product, investors can acquire existing apartments to improve the nation's housing supply. Workforce housing is often converted to Class A apartments through renovations, or it deteriorates over time to become low-income housing. Thus, protecting the current supply of workforce housing can alleviate the shortage of housing. Consequently, local government authorities offer attractive financing and tax abatement opportunities for investors that designate a portion of their units as affordable. By creating this designation, investors can slow the conversion of class B and C apartments into class A apartments and prevent middle-income workers from being priced out of housing.

68 HTF: Housing Trust Fund—HUD Exchange. (n.d.).
69 National Housing Trust Fund. (n.d.). National Low Income Housing Coalition.
70 Haughey. *Developing housing*.

Thus, investors willing to acquire apartments and convert the building's units to affordable will help the workforce housing supply in America.

In return for converting apartment units to affordable, government agencies will provide improved financing structures and tax abatement opportunities to investors. The Dallas Housing Finance Corporation (DHFC) is an example of such an organization. The DHFC can provide tax-exempt mortgage revenue bonds to investors looking to acquire or redevelop affordable multi-family housing. A major multi-family company out of California has found success through partnerships with the DHFC.[71] By financing its acquisitions through the DHFC bonds, the company is able to secure 5% more in leverage at a rate that is 25 basis points cheaper. Further, the company is able to receive 100% property tax abatements through its partnership with the DHFC. In these deals, the DHFC becomes the general partner with a .01% ownership interest and enters into a 99-year ground lease with the real estate company. As a result, the Dallas Central Appraisal District (DCAD) will grant a property tax exemption on the project. In order to qualify for these deals, the company must convert 51% of the units to affordable to tenants earning 60% AMI. While low, this 60% threshold is still within the confines of workforce housing according to the definition used for this thesis.

The benefits provided by the DHFC make workforce housing investments more accretive and help minimize the impact to cash flows from the lower rents inherent to affordable housing. It turns out, however, that the company pursuing

[71] McLanahan, W. (2020, March 6). Personal interview.

this strategy does not have to lower the rent in many of the properties it acquires. In many cases, the buildings are already comprised of tenants that meet the income qualifications necessary to live in the units. As a result, the rent change due to affordable designation is negligible. The company has had success across major markets in Texas as well as California, Washington, and Florida.

Similar to the above strategy, companies in Texas can target pre-stabilized, new construction apartments and receive incentives from local government corporations. If companies look to acquire these buildings before they are leased up, then the government corporation can provide incentives to convert a percentage of the units to affordable. Unlike the previous strategy, the company would only have to convert 15-20% of the units to affordable.[73]

There are more opportunities, like the ones in Texas, in other parts of the nation. In Boston, the city has launched the Acquisition Opportunity Program, which aids companies in acquiring market-rate multi-family buildings in return for converting the units to affordable. In order to capture the potential subsidies, which include $75,000 per unit, acquirers must designate at least 40% of the units as affordable and maintain them as affordable for at least 50 years.[74] In Chicago, Community Investment Corporation (CIC) offers attractive financing to companies willing to preserve affordability in Chicago. Since 1984, CIC has offered $1.3 billion in financing to companies targeting the workforce housing sector.[75]

[73] Ibid.
[74] Boston Wants to Flip More Market-Rate Apartments into Affordable Housing – Next City. (n.d.).
[75] Howard, T. (2019, February 19). Preserving Affordable Housing by Buying, Not Building.

Analysis

There are creative development and acquisition opportunities for investors seeking to enter the workforce housing space, but these tools are few and far between. The tools require investors to intelligently navigate the complicated and often hidden regulations of the specific markets they are entering. Further, success in one market does not guarantee success in another because each locality in the US have different regulations surrounding workforce housing. More often than not, local governments do not have any incentives for workforce housing investors. Currently, there are simply not enough local or federal government incentives for investors to achieve attractive returns in workforce housing on a macro scale.

Part 5: Specific Plan

The previous strategies are not viable in every city across the US because many of the cost-saving programs are only offered by certain organizations. Further, the potential strategies change from market to market. As a result, it would be difficult for a large investor to roll out a nationwide workforce housing initiative. The cost benefit analysis of workforce housing projects, as previously discussed, on top of a lack of government incentives often cause investors to forgo workforce housing for a more profitable project. Even so, real estate investors have been able to make returns in workforce housing without any need for government assistance. There are some markets in the US that have certain characteristics that support new workforce housing projects more than the rest of the US. By evaluating these characteristics, this thesis has compiled a list of the best markets for real estate investors interested in workforce housing.

Target Markets

Even with the current lack of local and federal government incentives, however, investors can still find profits in the workforce housing industry by selecting certain, well-positioned markets. Like any investment in CRE, some markets are better than others. Thus, an investor focusing on retail properties will not invest in every city in the US. Similarly, a workforce housing investor should limit the scope of its investments to a small selection of potential markets. Depending on the capital at the disposal of the investor, the investor can enter a few to all of the potential markets. By compiling a list of viable workforce housing markets, investors can enter only those markets that will enable them to achieve attractive returns in workforce housing. This thesis has compiled a list of 22 potential markets for profitable workforce housing investments. These markets were selected after an analysis of US MSAs using four criteria.

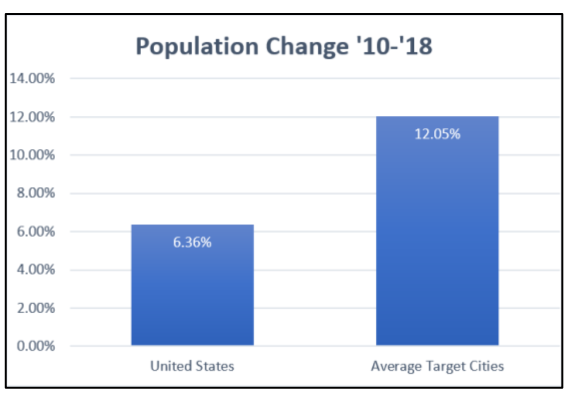
1. High Market Liquidity
2. Strong Demographics
3. High AMI
4. Proven Need for Workforce Housing

By using these four criteria, this thesis has identified 22 MSAs, shown below, that investors should consider first when investing in workforce housing.

Potential WH Markets	
Atlanta-Sandy Springs-Roswell, GA	Los Angeles-Long Beach-Anaheim, CA
Austin-Round Rock, TX	Nashville-Davidson--Murfreesboro--Franklin, TN
Baltimore-Columbia-Towson, MD	New York-Newark-Jersey City, NY-NJ-PA
Boston-Cambridge-Newton, MA-NH	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD
Charleston-North Charleston, SC	Phoenix-Mesa-Scottsdale, AZ
Charlotte-Concord-Gastonia, NC-SC	Portland-Vancouver-Hillsboro, OR-WA
Chicago-Naperville-Elgin, IL-IN-WI	San Antonio-New Braunfels, TX
Dallas-Fort Worth-Arlington, TX	San Francisco-Oakland-Hayward, CA
Denver-Aurora-Lakewood, CO	Seattle-Tacoma-Bellevue, WA
Houston-The Woodlands-Sugar Land, TX	Washington-Arlington-Alexandria, DC-VA-MD-WV
Las Vegas-Henderson-Paradise, NV	Tampa-St. Petersburg-Clearwater, FL

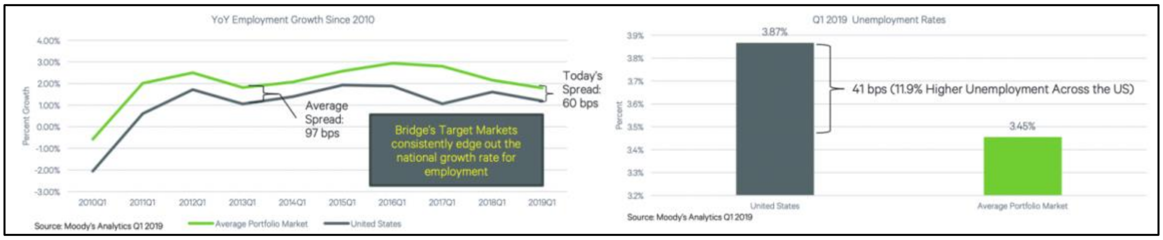
Strengths of the Markets

Investors should only enter strong CRE markets to minimize the risk of a workforce housing investment. These markets are characterized by high levels of liquidity and strong demographic metrics. There could be many markets in America with strong needs for workforce housing, but these markets are secondary or tertiary markets that do not have strong liquidity or demographic metrics. Thus, it would be harder for the investor to sell the property, and the property would have weaker returns due to the inferior demographic metrics. Also, there is greater exposure to economic recessions by investing in weak CRE markets. Because of these reasons, the first criterion for finding prospective workforce housing markets is to find strong CRE markets. The 22 identified markets all have strong population and employment growth. Strong determinants of rent growth and low vacancy rates in apartments are the population and employment growth of the city. The 22 identified cities, on average, had population growth that outpaced the average US city. In fact, the average population growth from 2010 to 2018 for the 22 cities was almost double that of the US.[77]

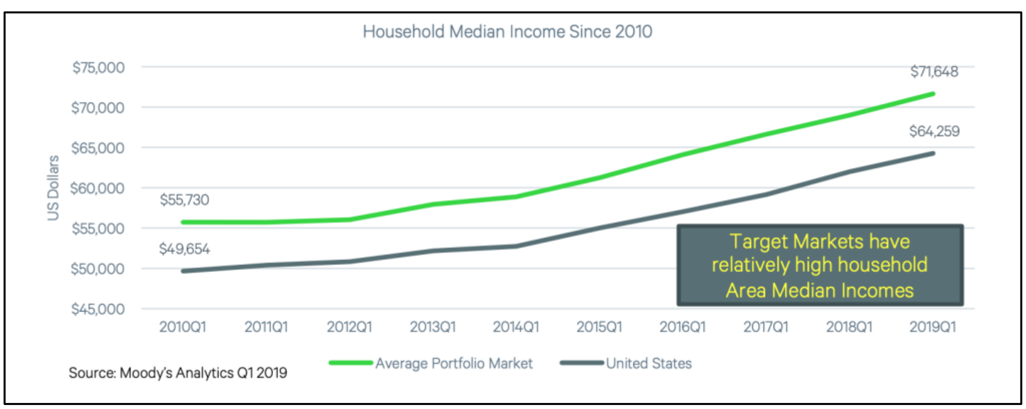


77 Population data sourced from the Census Bureau

A study by Bridge Investment Group looked at 16 very similar markets to the previous 22 and found that these major markets have the indicators of a strong CRE market. In addition to their rapid population growth, these markets have well-performing employment metrics, as shown in the graphs below.[78]



Not only do these markets experience higher employment growth, they also have lower overall unemployment rates than the US. Due to the low unemployment rates and high employment growth of the target markets, as shown in the graphs above, the economies of these cities seem to be better equipped than other cities in America. The workforces of these markets make the economies better insulated to market downturns, and they provide wage-earning tenants for apartments. Also, the average tenant in the apartments of these markets has a higher household income. The study from Bridge Investments found a significant difference in AMI between the target markets and the US, as shown in the graph below.[79]

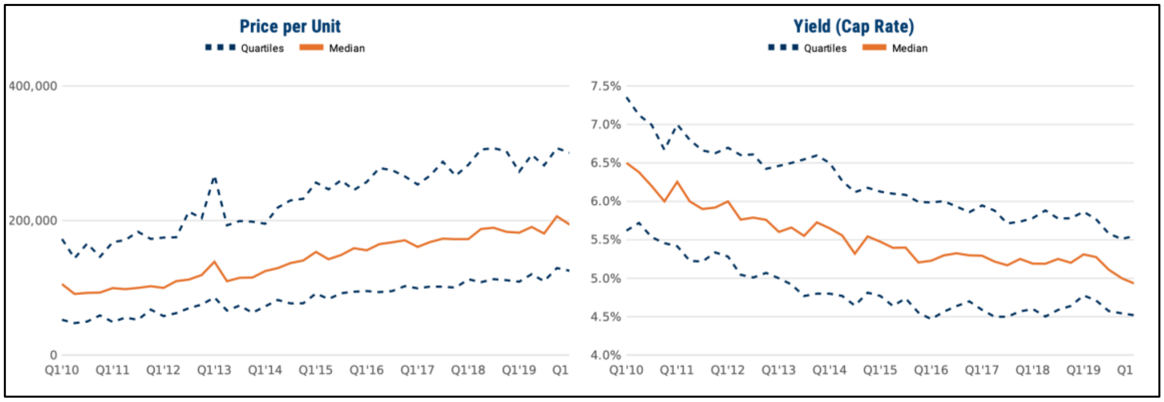


78 Khidekel, I., & Robinson, J. (2019). A Ripe Environment for Double Bottom Line Returns. 9.
79 Ibid.

With higher AMIs, investors can charge their tenants higher rents and still meet the classification of workforce housing. Thus, investors can increase their rental income by entering cities with high AMIs. There will be higher land costs as a result, but it is likely that the higher rental revenue will make up for this added cost in the long run. There could be scenarios in which the added land costs outweigh the increase in rental revenue, making the returns similar to investments in low AMI cities. In this case, investors could still benefit from entering the high AMI cities. With the overall returns being the same, an investor with a mandate to invest large amounts of capital would prefer the high AMI city over the low one because it could put to work more capital per investment. Since the rental revenues would be lower, a project in a low AMI city would need to be smaller in magnitude to make it economically feasible. With the higher rental revenue intrinsic to high AMI cities, an investor can develop larger projects while still achieving acceptable returns. Thus, an investor trying to put large amounts of capital to work would prefer the high AMI cities to the low AMI cities. Also, it is possible that local governments will decrease regulations and increase incentives in the future, which would mitigate the added land cost and keep the high rental revenues intact.

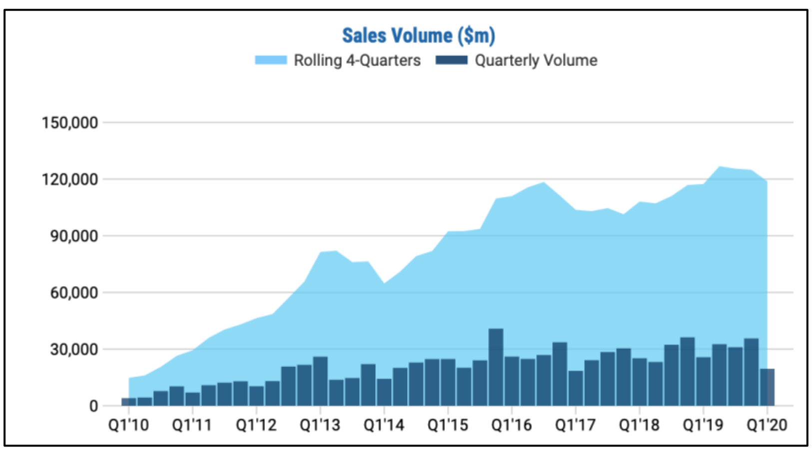
Not surprisingly, the apartments in the 22 identified markets have experienced consistent increases to their values, as shown in the following graphs.[80]

[80] Data sourced from Real Estate Capital Analytics



The graphs above show the price per unit and cap rate trends in only the 22 identified markets. Over the past ten years, the price per unit in these markets has steadily increased while the cap rates have decreased, implying the apartments have performed well in these cities.

The liquidity of these markets appears to be very strong, as evidenced by the sales volume of apartments. In the graph below, the sales volume of apartments in the 22 identified markets is shown over the past decade. [81]



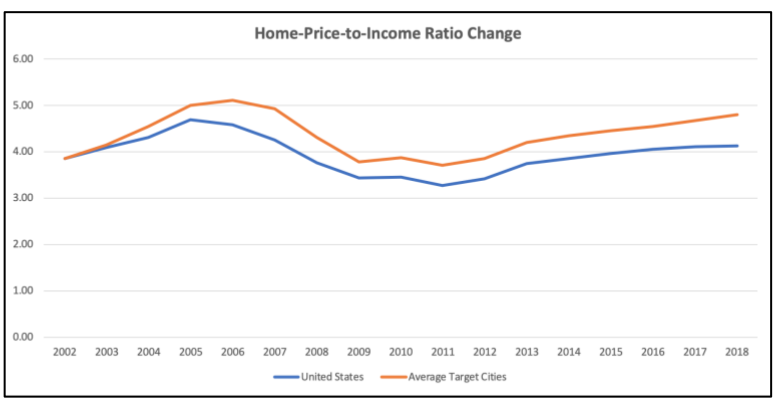
Over the past ten years, apartments in these markets have been sold in significant volume, so workforce housing investors should be confident that they will be able to

[81] Ibid.

exit new developments and acquisitions in these markets. Further, the high sales volumes indicate an increased amount of new opportunities hitting the markets each year, so investors will have access to new deals as they come online.

Needs of the Markets

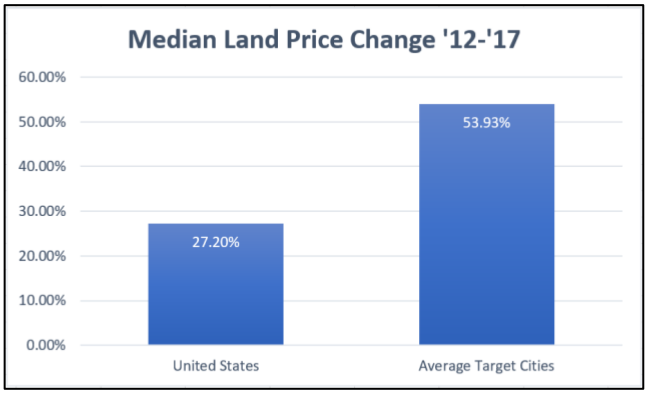
It is not enough for investors to identify strong CRE markets. These markets must also have a proven need for workforce housing if investors want to find success in the workforce housing sector. Indicators of a need for workforce housing include the number of people burdened by rent, home-price-to-income ratios, and the cost of land. In all of these metrics, the 22 target markets outrank the US, indicating a need for workforce housing. The home-price-to-income ratio measures the cost of a single-family home compared to the median annual income of the population. Thus, a higher ratio indicates a more expensive housing market. From 2002 to 2018, the average home-price-to-income ratio in the 22 markets has been higher than the US average, as shown in the graph below.[82]



Since these markets have higher housing prices compared to the rest of America, it

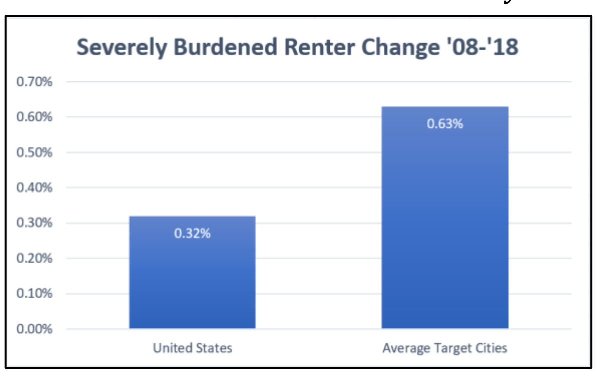
[82] Data sourced from *The State of the Nation's Housing 2018*

seems that there could be a need for more affordable housing. In addition to the high housing prices, there are high land prices in the 22 markets. Across the 22 markets, the median land price from 2012 to 2017 increased by almost 54% while the average price change for the US was nearly half that at 27%.[83]



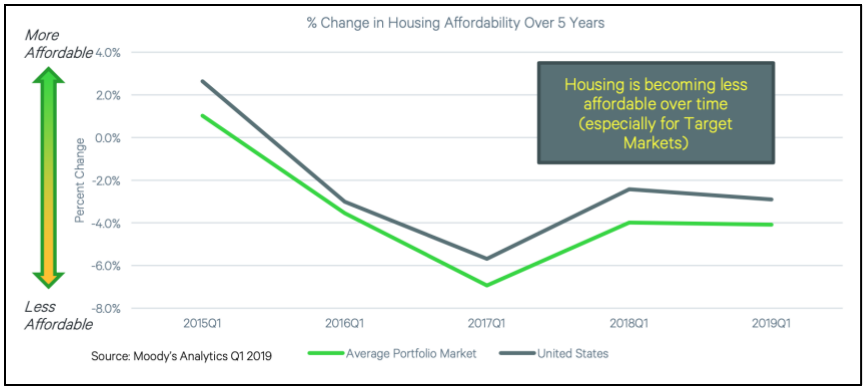
As previously discussed, higher land prices contribute to increased construction costs which, in turn, lead developers to charge higher rents to recoup their investment. Due to the high land prices in these markets, it appears that renters could be facing the burden of high rents.

In fact, renter populations in these markets have become increasingly burdened over the past ten years. From 2008 to 2018, the percentage point increase of severely burdened renters in the 22 markets was nearly double that of the US.[84]



83 Data sourced from *The State of the Nation's Housing 2018*
84 Ibid.

Severely burdened renters are defined as renters paying over 50% of their income on rent.[85] Thus, the identified markets have experienced high growth in unaffordability to their renter populations. The study from Bridge Investments of similar markets also found a decrease in affordability in the major markets, as modeled below.[86]



Analysis

Investors looking to enter the workforce housing industry should focus on the 22 MSAs outlined in this thesis. With a lack of government subsidies, investors should only enter markets with proven liquidity, strong demographic drivers, high AMI, and a proven need for housing. By only entering markets that satisfy these requirements, investors can give themselves the best opportunities to profit in a sector that has been deemed unattractive by most investors. While following these criteria will help improve the profitability of a project, it is not sufficient to attractive enough investors to fix the shortage of housing. To do that, local and federal governments must intervene.

85 Rental Burdens: Rethinking Affordability Measures | HUD USER. (n.d.).
86 Khidekel, I., & Robinson, J. (2019). A Ripe Environment for Double Bottom Line Returns. 9.

Part 6: Recommendation to Governments

Investors are unlikely to invest in workforce housing on a large enough scale to adequately affect the disparity between supply and demand in the current market. The costs of developing and acquiring multi-family apartments are causing investors to stray away from workforce housing. Real estate investors can find more attractive returns in high quality products that bring in high rents or low-income housing that brings in structured tax subsidies from the federal government. Both the local and federal governments can make changes, however, that could change the economic feasibility of investing in workforce housing on a macro scale in the future. These changes include decreasing regulations and creating a federal workforce housing subsidy program.

Improve Local Regulations

As this thesis previously addressed, there are many studies that suggest that strict regulations and cumbersome permitting processes contribute to the high housing costs in major US markets. Investors must navigate density requirements, permitting delays, and land use controls before beginning a new development. These inhibitory statutes cause investors costly delays and expenses. Thus, it is more difficult for a workforce housing investor to justify their investment in a product that it already bringing in less revenue. Further, many communities protest the construction of affordable housing in a movement known as “Not in my Backyard.” In response to these protests, many local governments have restrictions targeted at prohibiting new affordable housing developments. Examples of such restrictions include subdivision controls and exclusionary zoning.[87] A decrease in restrictive zoning would enable increased workforce housing development.

Not every city has a need for workforce housing just like not every city has inhibitory regulations. Thus, the impetus for change lies with the local governments instead of state governments. County and city governments must assess their regulatory environment to determine whether or not they are creating a shortage of affordable housing. If these government bodies determine that they have cumbersome development procedures and that their constituents have a need for housing, then these government bodies should create a mandate to enact change. Unfortunately, not enough local governments have done so. Thus, it may be necessary for state governments to implement such mandates to encourage local governments to make a change. If there is a national movement to decrease the most burdensome housing regulations, then investors will be more likely to contribute to solving the need for workforce housing.

Federal Subsidy Program

Most local government policies surrounding workforce housing subsidies are not universal across the nation. Subsequently, it can be difficult for a large investor to enter the workforce housing space because of the amount of effort required for each deal. There is no universal subsidy program for workforce housing that makes new developments or acquisitions profitable. Each city has different local policies and corporations that affect deals differently than other cities. Further, not enough

[87] Exploring the Current State of Knowledge on the Impact of Regulations on Housing Supply

local governments have a mandate to increase workforce housing and, subsequently, lack enough incentives to spur new investments. For investors to be able to better pursue workforce housing nationwide, the federal government should implement a nationwide workforce housing subsidy program.

There should be a federal program that benefits investors in return for developing or rehabilitating workforce housing. Currently, such a program only exists for low-income housing. Through the Low-Income Housing Tax Credit (LIHTC) program, real estate developers can make attractive returns across the nation while benefiting the supply of low-income housing. As part of the LIHTC program, the federal government allocates funds to state governments based off of the state's population each year. Real estate developers can apply to their state's Housing Finance Agency (HFA) to secure these funds in the form of tax credits. New developments typically receive a 9% credit while redevelopments receive a 4% credit. These credits represent a varying percentage of the construction costs of a project and they can be claimed each year for 10 years. Developers use these subsidies to improve the financial feasibility of their projects by either selling the credits to investors or by using them for financing.[88] Since 1986, the LIHTC program has supported around 2 million housing units.[89]

Following the same structure of the LIHTC program, the federal government should create a nationwide workforce housing program. The specifics of the program would differ from LIHTC, but the general infrastructure would be similar.

88 Keightley, M. P. (n.d.). *An Introduction to the Low-Income Housing Tax Credit*. 8.
89 *What is the Low-Income Housing Tax Credit and how does it work?* (n.d.). Tax Policy Center.

The federal government would give states access to funding that real estate investors could access by either developing or rehabilitating housing for people making incomes between 60% to 120% AMI. Without subsidies, workforce housing typically creates better financial returns than low-income housing due to the higher rents of workforce housing. Thus, the tax credits would not need to be as large to make the workforce housing projects attractive to investors. Also, the size of the tax credits should differ depending on the AMI targets of the property. A property with residents making 120% should not receive as much funding as properties with 60% AMI residents. In addition, the subsidies should be awarded on a competitive basis to the projects that help the lower end of the AMI target and that remain affordable for the longest time, similar to LIHTC. After the creation of the LIHTC program, a systematic infrastructure of developers, lenders, and attorneys evolved to support the expansion of low-income housing across America. Similarly, various players in the CRE industry would likely enter into the workforce housing sector in response to this program. A workforce housing program could provide investors the missing incentive to pursue workforce housing on a scale large enough to contribute to solving the nation's need.

Part 7: Conclusion

The need for more affordable housing in the US is significant, and it will only increase if society continues its current trajectory. The infrastructure of our nation will become more strained, the economies of America's most prosperous cities will slow, and America's most vital service providers and workers will live lives marked by unhappiness and financial struggle. The outlook for America's future is bleak if the housing struggle is not addressed.

At the same time, commercial real estate markets are at record highs, and investors have access to seemingly infinite capital in the currently prosperous economy. Thus, it seems likely that real estate investors would step in to solve the disparity between supply and demand for housing as another investment avenue. While some investors are addressing this disparity, most are not. Investors seem to be deterred by inferior investment returns and impeding government regulations. Due to the cost structure and low rents of workforce housing, these projects typically provide less return on investment than other CRE projects, which discourages investors. Also, local government regulations are preventing, both directly and indirectly, the development of workforce housing by increasing development costs and restricting the supply of developable land.

Investors that do wish to invest in workforce housing do not have many options in today's market. Investors do have the ability to partner with certain city and county governments to reduce the development costs of their projects, but these partnerships are effort-intensive and unscalable. Investors could strategically use incentive programs offered by local governments to produce more workforce housing, but these programs are limited in size and scope and are not available in most MSAs. The best option for investors, currently, is to pursue workforce housing in only a few markets with especially attractive demographic and demand drivers. These strong markets give investors the best opportunity to achieve attractive returns without local or federal government assistance. This is not an adequate solution for the nation's largest CRE investors, however, since it is not scalable to a macro level. Consequently, there are currently not enough investors in the workforce housing industry.

In order to increase investor activity and mitigate the nation's need for housing, both the local and federal governments must change their current deficiencies. Local governments need to realize the long-term problems associated with a lack of housing and change their inhibitory regulations. There are simply too many costly regulations and zoning requirements that are choking out the supply of workforce housing. Further, the federal government should implement a program resembling the LIHTC program to incentive investors. Investors lack an organized infrastructure to roll out a workforce housing investment strategy across the nation. A federal tax incentive program would alter that and increase investor activity. By making these changes, local and federal governments can provide vital help to the broken housing system in America, and, in turn, benefit the lives of the nation's essential workforce.

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